

Getting past the who and how many to the how and why in USDA Forest Service public involvement processes

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Abstract

The scope and intensity of public involvement in USDA Forest Service decision-making has been a historically contentious issue. Most research to date on the topic has been largely quantitative, and can overlook the details important to understanding those conflicts. This article presents qualitative, exploratory research conducted on the national forests in Virginia, USA designed to examine the behavior of public participants, the Forest Service, and the effects of the public participation process on project implementation. Implementation appeared affected to varying degrees by the attributes of forest management projects, the nature of the active public stakeholders, the timing of each participation stage, and a lack of procedural standardization. Future areas of research inquiry on a larger scale might be warranted in how the terms of forest management plans are translated to project actions; the nature of pre-decisional and post-decisional review of agency actions; project delays stemming from the participation process; and the effects of a lack of uniformity in participation processes at the forest-wide scale.

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1. Introduction

Public involvement in Forest Service decision-making is a contentious issue attended by charges and countercharges, accusations and counterclaims, value-based arguments, and anecdotal stories (Tobias, 1992; Vining and Ebreo, 1991). For all the years it has existed in various forms, the role that the public participation

plays in influencing the outcome of national forest management is still ripe for investigation. As Forest Service administrators and managers need to know how best to cope with expressions of public dissatisfaction with their decisions, it would serve the Forest Service to know if and how administrative public processes might be crafted that will keep initially small disagreements from becoming expensive and time-consuming appeals or lawsuits. Equally important, it is not a question of whether the public should be involved in Forest Service decision-making, but in understanding when and how they should be involved, and how such involvement can

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best benefit the public-at-large. Understanding what commenters, appellants, and litigants are saying and doing, in addition to knowing how many there are or who they are can add to our perception of national forest public participation. It seems prudent to recognize the possible existence of a nexus between the opportunities for the public to comment, appeal, and litigate, and what effect these opportunities have on the behavior of public participants and the content of their comments, appeals, and legal arguments. Above all, it is important to know whether public input and feedback processes contribute to better land management decisions that are scientifically sound and in the public interest. Application of current public involvement processes may present continuing barriers to dispute resolution and trust; with the manner in which the public and the agency interact playing a dominant role (Germain et al., 2001). To begin a dialogue on these questions, this article presents an exploratory examination of how the public involvement process has actually progressed, through a systematic, qualitative case analysis of forest management projects on the George Washington and Jefferson National Forests (GWJNF) in Virginia.

2. Background

Since the environmental movement began in the 1960s and 1970s, the public has demanded a greater voice in decisions affecting public lands and national forests. The United States Congress responded to this demand by passing the National Environmental Policy Act (NEPA) of 1969, the Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974, the National Forest Management Act (NFMA) of 1976, and the Appeals Reform Act of (ARA) of 1993 — all four mandating public involvement and participation in national forest management decision-making, directing the Forest Service to formally obtain the views of the public about possible management decisions, and providing an avenue of redress for citizens or groups dissatisfied with agency decisions (Baldwin, 1997; Coulombe, 2004; Floyd, 2002; Gericke and Sullivan, 1994; Jones and Callaway, 1995; Steelman, 1999; Tipple and Wellman, 1991).

These laws have resulted in complex public involvement processes that generally include three administrative stages, and one or more potential judicial stages (Fig. 1). The three administrative stages are requirements set forth in section 1909.15 of the

Forest Service Handbook (FSH); NEPA (40 C.F.R. §§ 1500–1508); and Notice, Comment, and Appeal Procedures for National Forest System Projects and Activities (36 C.F.R. § 215). Each stage operates in linear form over time. The scoping stage (Stage 1) begins with the release of an agency proposed action and applies to all proposed actions which require environmental analysis, often followed by a 30-day public comment period. During this time, the agency invites participation of affected or interested persons or parties and determines the scope and significant issues related to the proposed action to be analyzed in depth in the environmental analysis. The Forest Service commonly holds a 30-day public comment period after the release of proposed actions to conduct scoping, but this is not a requirement set in any laws, regulations, or policies. Once the significant issues are identified, the agency must then create a range of reasonable alternatives to accomplish its proposed action that address these significant issues. Alternatives are then developed and the appropriate environmental analyses are conducted. Depending on the possible effects of the project on the quality of the human environment, the agency will then release an environmental assessment (EA) or draft environmental impact statement (DEIS), followed by a formal 30-day public comment period (for EAs) or 45-day public comment period (for EISs) (Stage 2). Finally, a Decision Notice (for EAs) or Record of Decision (for EISs) is released, followed by a 45-day public appeal period (Stage 3). If any appeals of the decision are received and accepted, the Forest Service must make attempts at informal disposition to resolve the appeal. If no resolution is reached, the agency must then make an appeal decision within 45 days after the end of the appeal period, either affirming or reversing the responsible official's decision in whole or in part.

Once public participants have exhausted these administrative opportunities, they have the right to pursue judicial remedies, starting with the U.S. District Court, to the U.S. Court of Appeals, to the U.S. Supreme Court. In addition to these procedures, the Forest Service may categorically exclude various types of projects from documentation in an EA or EIS that do not individually or cumulatively have a significant effect on the quality of the human environment (FSH 1909.15, §§ 31–33). Examples of such categories include prohibitions to provide short-term resource protection, repair

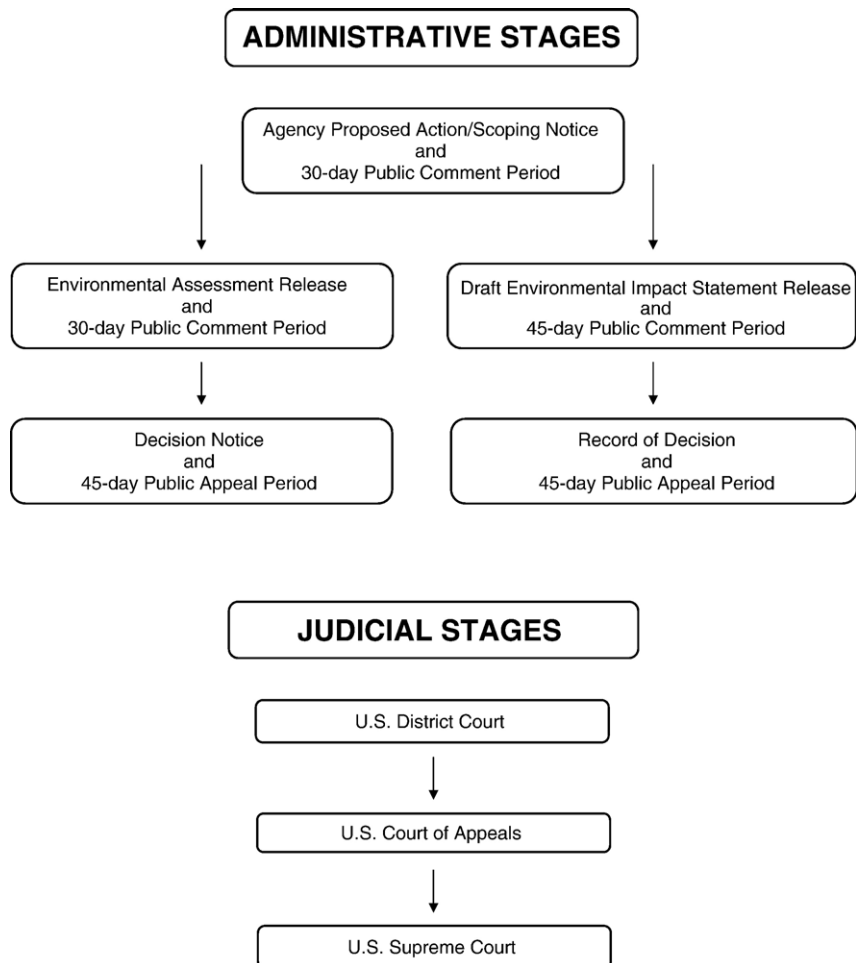


Fig. 1. Administrative and judicial stages for Forest Service project-level activities.

and maintenance of administrative sites, land acquisition, regeneration of an area to native tree species, timber stand and/or wildlife habitat improvement activities, and salvage of dead and/or dying trees not to exceed 250 acres and requiring no more than one-half mile of temporary road construction. Depending on the category, a project file and Decision Memo (DM) may or may not be required.

Together, these laws and processes empower citizens and legitimate public involvement; they reflect the desire of citizens to influence agency decisions and the intent of Congress to direct how national forests should be managed; and they indeed attempt to address conflicts over wilderness, clearcutting, biodiversity, road management, and other contentious national forest

issues. However, these laws and processes often identify problems rather than solve them, they may polarize conflicts over national forest issues, and they may contribute to Forest Service decision-making becoming increasingly complex, costly, and ineffective (Floyd, 2002).

3. Methods and procedures

Case studies specifically examining how Forest Service public involvement proceeds are relatively rare, and academic or government examinations of those such processes tend to be sporadic, typically recurring only during times of national forest management crises (Mortimer et al., 2004). The sheer volume of

documents¹ that must be examined in a national forest case study has recommended the use of other approaches to investigating national forest public participation, including both quantitative (Baldwin, 1997; Cortner et al., 2003; Gericke and Sullivan, 1994; Jones and Taylor, 1995; Teich et al., 2004; US GAO, 2001) and qualitative methods (Corley, 2004; Germain et al., 2001; Hellström, 2001; Overdevest, 2000; Steelman, 1996). Prior qualitative studies have largely depended upon survey and interview techniques, wherein perceptions of the participation process are highlighted. This study's aim was to instead examine the documentary evidence, or "paper trail" left by the agency during the public participation process, thus avoiding the bias that may accompany self-reporting of policy effectiveness or implementation (Butler and Koontz, 2005).

As Leskinen (2004) noted, a suitable planning procedure is crucial to good communication between the parties to a forest management dispute. This study affords the opportunity to closely scrutinize the Forest Service version of that procedure. Additionally, beyond self-reported satisfaction with the participation process (Germain et al., 2001), this analysis can add to an understanding of the extent to which the Forest Service has relied upon principles of "good practice" for public participation or whether the agency has demonstrated the attributes of an effective public consultation process (Buchy and Hoverman, 2000).

This study was designed to investigate the interactions between participants and the agency in situations where conflict peaked — specifically, litigation against the agency. In addition to providing the opportunity to examine the public participation process in its arguably most contentious setting, this approach also permits an empirical inquiry into the institutional framework of legal and procedural resources available to public participants (Overdevest, 2000). Although there has been much discussion of the merits and effectiveness of Forest Service public participation processes, the relative lack of qualitative case research recommended an exploratory approach, one designed to generate hypotheses rather than test them (Sellitz et al., 1964). The research question posed was merely "what can we observe during the course of the public participation process leading to a context of heightened conflict,

where do these observations lead, and what hypotheses might we develop?"

A case study approach was selected, one designed to examine the entirety of administrative procedures up to and including court contests, and to further provide the opportunity to examine an array of sample cases against each other. Relying upon Yin's (1994) multiple-case approach, the entirety of the available administrative records for each project resulting in litigation formed the basis of the analysis. Projects that resulted in litigation were selected because we wished to examine the most contentious proposals on the GWJNF, those in which parties were willing to take public participation to its logical extreme — the filing of lawsuits. While multiple data sources might be preferable in subsequent studies, for the purposes of initial investigation it was decided that comprehensive documentary evidence would suffice.

Case analysis was conducted based upon Patton's (1990) goal-free evaluation method due to the desire to avoid normative judgments on the behavior of either the agency or public participants. Instead, individual case analyses, as well as cross-case observations, were analyzed for patterns suggestive of possible hypotheses suitable for further investigations. Findings are therefore indicative of areas in which more detailed study might be appropriate, rather than serving as a comprehensive policy analyses of current practices or processes. To illustrate, an analyst might believe that the public participation approach of thoughtful collaboration (Bryan, 2004) may be desirable, but it is also necessary to be aware that collaborative processes might instead intensify a natural resource conflict (Walker and Hurley, 2004). To avoid permutations of this problem, this analysis was not designed to critique any particular component of the participation process nor to suggest policy remedies, but to better describe the process in a sample set of the most contentious projects on the GWJNF.

3.1. Study area and data set

The Forest Service was established by the U.S. Congress in 1905. The Forest Service is a sub-agency of the United States Department of Agriculture with a permanent workforce of approximately 30,000 employees. It is responsible for land management activities on approximately 78 million hectares of public

¹ Each administrative record for an individual project on a national forest can be many hundreds of pages long.

land distributed across 155 national forests and 20 national grasslands (Fig. 2). The agency's primary land management direction from the U.S. Congress is the management of the national forest for the multiple use and sustained yield of renewable resources such as water, forage, wildlife, timber, and recreation.

Each national forests is divided into a various number of ranger districts, which are responsible for the direct implementation of a diversity of land management activities such as timber harvesting; fuels reduction to help prevent wildland fires; administering recreational, oil and gas, grazing, and other permits; operation of campgrounds; and wildlife and fish habitat improvement projects. There are currently more than 600 ranger districts agency-wide. In addition to management of the national forests and grasslands, the Forest Service is the largest forestry research organization in the world, and provides technical and financial assistance to state and private forestry constituents.

The GWJNF is located primarily in the state of Virginia, with some portions also located in the state of West Virginia (Fig. 2). The forest is comprised of approximately .73 million hectares, and is divided into eight ranger districts and one national recreation area. The cases in this study, located on various ranger districts of the GWJNF, represent all Forest Service project-level activities (pursuant to 36 C.F.R. § 215) on the GWJNF culminating as judicial actions against the agency for the period of 1994 to 2002. The data represents seven out of 10 lawsuits filed and decided against the GWJNF during the nine year study period, with a total of twelve project-level activities and their administrative records collected from Forest Service officials at the GWJNF Supervisor's Office in Roanoke, Virginia. Administrative records for two other lawsuits were unavailable for this study, and one additional lawsuit involved a Special-Use Authorization (pursuant to 36 C.F.R. § 251, Subpart C), which was outside the scope of this study.

3.2. Case study procedures

Court documents and administrative records were used to narrate, track, and compare the procedural, public involvement, and decision-making processes for each case. Specifically, the administrative records provided information on: (1) comment and appeal procedures; (2) comment and appeal content; and (3)

the decisions rendered by Forest Service officials after receiving comments and appeals. The court documents were used to describe: (1) legal procedures; (2) the basis for legal complaints; (3) legal arguments filed by the plaintiffs; and (4) the decisions rendered by the court after reviewing the legal arguments.

4. Comment, appeal and litigation analyses

To analyze public comments, administrative appeals, and legal arguments, qualitative and contextual research methodologies were employed, as well as a combination of traditional legal research techniques utilizing the parties' pleadings and judicial opinions. Such analyses were conducted individually and comparatively for the cases, allowing for a detailed description of all participation actions by individuals or interest groups both within and across the cases.

Forest Service administrative records, even of relatively small projects, are nonetheless quite voluminous. Therefore, qualitative analysis of public comments, administrative appeals, and legal arguments is extremely time-intensive. As a result, it was infeasible to qualitatively analyze the entirety of the public comments and administrative appeals in each case, so only the comments, appeal issues, and legal arguments of the individual or interest group who filed the eventual lawsuit in each case were fully analyzed and tracked throughout the process in each case. Thus, a primary commenter, appellant, and litigant in each case was identified, although some cases included more than one litigant.

The comments and/or appeals filed by public participants in these cases, but who did not file a lawsuit were summarized in a table for each public involvement stage in each project. The issues raised by these individuals or interest groups were categorized consistently with the methods described in the next section, and identified as being in favor of or opposed to the agency proposed action (Table 1). The comments and appeal issues filed by the primary commenter, appellant, and litigant in each case were also included in these table summaries. Although these non-litigant participants were not fully tracked throughout the process in each case, these summaries helped capture their concerns; illustrate how their concerns compared to the concerns of the primary commenters,

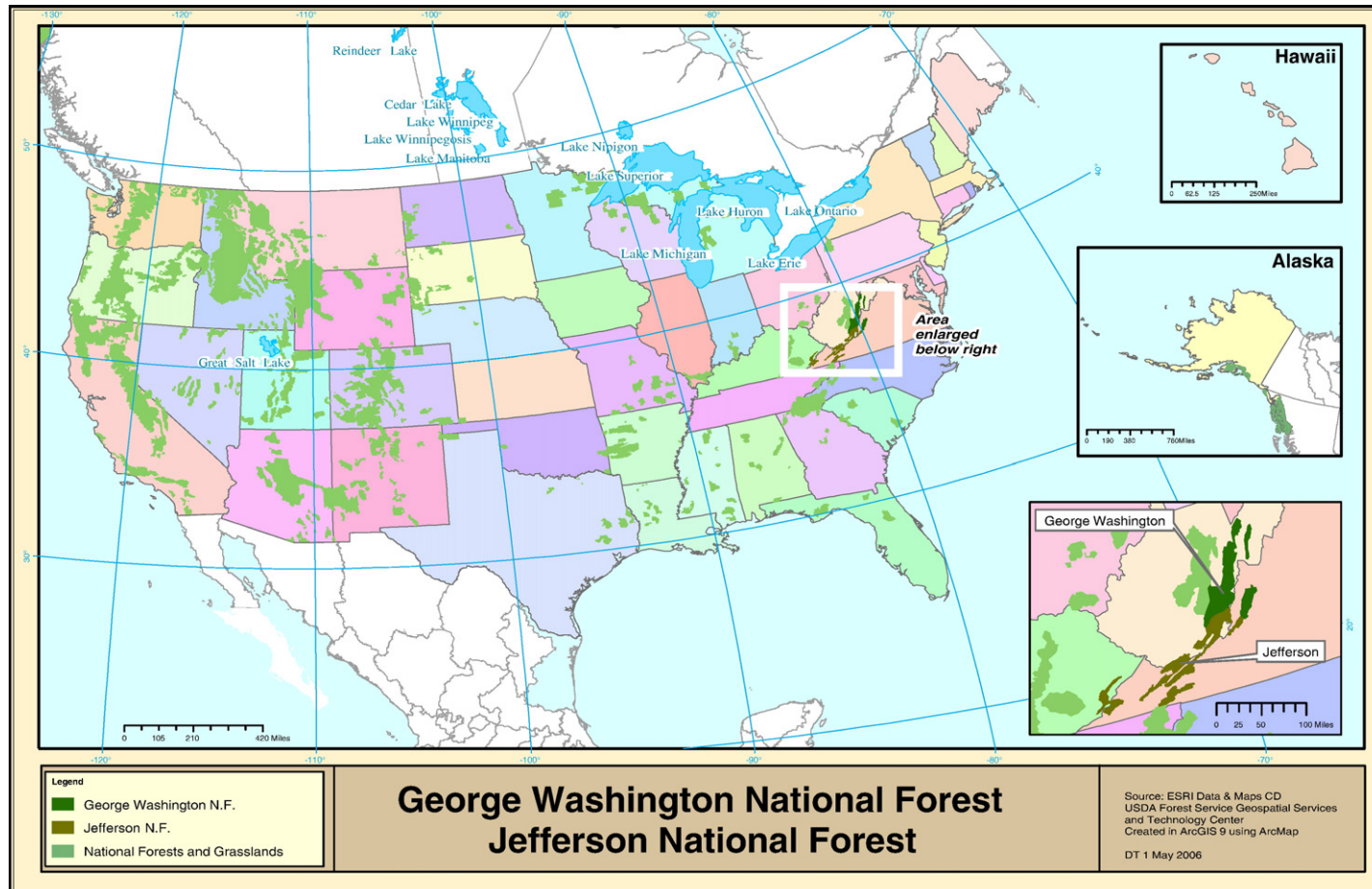


Fig. 2. National forest and grasslands of the United States — George Washington and Jefferson National Forest.

Table 1
All public comments on the Rucker Lap Timber Sale scoping notice

Category	Commenter							
	Robert Mueller	AFMG	CTF	GPC	Robert Fener	George Denney	ATC	CABP
Access					•			
Adjacent landownership					•			
Aesthetics					•		•	•
Alternatives			•					•
Aquatic communities			•					
Archeological/natural heritage resources					•			
Climatic					•			
Community opposition					•			
Cumulative effects		•	•					•
Ecological	•		•			•		•
Economics			•					
Ecosystem management								•
Environmental								•
Analyses/documentation								
Forest health		•	•					
Hydrological			•		•			
Old growth	•				•			
Public involvement						•		•
Recreation/tourism						•		
Regeneration		•	•	•	•	•		•
Silviculture		•	•	•				
TES/PETS/MIS			•					•
Timber harvesting	•	•	•		•	•		
Vegetation								•
Water resources					•			
Wildlife			•					
The proposed action	–	+	N/A	N/A	–	–	N/A	–

+ = in favor of the proposed.

– = opposed to the proposed.

N/A = not applicable.

Note: vertical highlight identifies the primary commenter, appellant, and litigant.

appellants, and litigants; and further substantiate the observations described later in this article.

4.1. Matrix design

To qualitatively analyze public comments and administrative appeals filed by the primary commenter, appellant, and litigant in each case, it was necessary to create matrices that could be used to categorize, analyze, and track comments and appeal issues within each case (Miles and Huberman, 1994). Each matrix

has a Category, Public Comment or Appeal Issue, and Forest Service (USFS) or Appeal Deciding Officer (ADO) response column. Public comments or appeal issues, and the Forest Service's response to such comments or appeal issues, are categorized and numbered in the rows (see Tables 2 and 3). To ensure that comments or appeal issues were consistently categorized, a list of keywords for each category were identified and recorded. There were a total of 30 keyword categories identified, and most categories were used at each stage in each case. The numbers in

each matrix under each category for each comment or appeal issue do not directly correspond to matrices for other stages or projects. However, the categories and numbering system were used to manually and systematically conduct content analysis and track categories and issues raised from one stage to the next for each project.

This approach produced 328 pages of the matrices described above to consistently categorize, analyze, and track the comments and appeal issues of the primary commenters, appellants, and litigants at each stage in each case, as well the comment and appeal issues of public participants that did not file a lawsuit as described in the previous section. An example of how these methods were employed can be found within the next major section.

5. Classification of interested parties

One of the most challenging aspects of the study was the classification of commenters and appellants. Since there appear to be no established standards or guidelines for such classifications, it was decided, after discussion with several Forest Service officials, that the opening sentence of comments and appeals would serve as the primary criterion for classifying commenters and appellants. Thus, to be classified as an *interest group*, comments and appeals had to include opening sentences such as:

1. “On behalf of Interest Group X, I would like to submit...”

Table 2

Robert Fener’s comments on the Rucker Lap Timber Sale scoping notice

Category	Comment	USFS response
<i>Access</i>		
(1)	In summer months the tall canopy provides a cool place to walk when fields and clearcuts are neck deep in ticks. In winter, when snows make the road impassable, the forest provides the route I take between my home and where I park my vehicle. If this area is cut, the brush will be so thick a hound dog will have to back up to bark.	The sale will be administered in such a way as to provide for slash treatment between Units 1 and 2 so as to allow foot travel to the inholding in bad weather, and to keep an old road open in Unit 2 for the same reason.
<i>Aesthetics</i>		
(1)	Portions of Section 2 are within 200 feet of my home and are highly visible. This will destroy the view from the front of my house and potentially devalue the resale value of my property.	The southern 2/3 of Unit 2 will be visible from the dwelling on the inholding, private property to the west of Unit 2. Sale layout will minimize the visual concerns by leaving several clumps in the unit and feathering the top edge of the unit.
<i>Archeological/natural heritage resources</i>		
(1)	Located in the proposed timber harvest areas are archaeological features unique to this area. I am a trained archaeologist, and along with two USFS archaeologists, we have located archaeological areas worthy of further research and protection.	Some areas in this compartment show evidence of historic occupation. A Forest Archaeologist surveyed the project area and found historic and prehistoric cultural resources. The units were flagged out on-the-ground to avoid these areas. The Archaeologist’s report is located in the analysis file. In addition, neither action alternative will have any adverse impacts on cultural resources. If evidence of any sites is discovered during project implementation, work will be stopped in and around the discovery. The Forest Archaeologist will be consulted to evaluate the site and determine what measures are needed to protect it. Timber sale contract provisions will be used to protect any such sites found during sale activity.
<i>Climatic</i>		
(1)	Katabatic, or cold downslope winds, are characteristic of a weather pattern known locally as Great Northerns. Tree harvest upslope will accelerate wind velocity and will lead to a zippering effect of adjoining tree and home vulnerability and damage.	Outside the scope of the project.

Table 3

Robert Fener's comments on the Rucker Lap Timber Sale environmental assessment

Category	Comment	USFS response
<i>Access</i>		
(1)	If hunters are unable to use the proposed cutting areas, this will result in greater incursions on my property.	The cutting units will still be available for hunting access after the timber is removed.
(2)	I appreciate the consideration to my concerns about accessibility, but I am curious why the space between compartments is held to 330 feet (minimum) but not considered for adjoining edges of private properties.	The 330 feet between regeneration units on National Forest Land is a requirement in the Forest Plan. There are no such requirements for adjacent private property.
<i>Aesthetics</i>		
(1)	The EA does not adequately address the aesthetic impact which Alternatives 2 and 3 would have on me and my property. This harvest is not being done within view of the Appalachian Trail, so why should I be treated considerably worse than the occasional non-resident forest user?	Section III.A.2 on page 17 of the EA addresses the visual resource in relation to the Alternatives, and there is discussion about the private dwelling in both Alternatives. The proposed action in either alternative meets the Scenic Condition Objective for MA 17, and the proposed method of regeneration cutting (modified shelterwood) is the least impacting (visually) when compared to the clearcut and seedtree methods.
(2)	I would be forced under Alternatives 2 and 3 to look at a clearcut eyesore, or virtual clearcut eyesore, for the next 30 years. Leaving "several clumps" of trees in the unit totaling 20–30 square feet of basal area is not an aesthetic solution. I'm still looking at clearcuts from 1970 on Long Mountain, and from 1983 on Piney Mountain, and "it ain't pretty." Diminished aesthetics will have a dramatic effect on the value of my property. If you "modify," "regenerate," or "clearcut," it will profoundly destroy the view from my home. Where a nuisance, i.e. chainsaw noise, poison chemicals, eyesore, etc., diminishes a person's quality of life, then such a person is entitled to compensation.	On page 17 of the EA, it was stated that we would leave several clumps in Unit 2 and feather the top edge of the unit. The remainder of the unit would have a leave BA of 20–30 square feet. The clumps would be in addition to the 20–30 leave BA. The analysis on the proposed alternatives for the project meets the requirements of the NFMA. Chainsaw noise was not raised as an issue in the scoping process. The noise is very short-term and within the range of reasonable, acceptable, and approved procedures for timber management activities. The EA does not propose the use of "poison chemicals" such as herbicides. So called "eyesores" are addressed under Visual Resources under Section III.A.2.

2. "Interest Group X submits the following..."

3. "We would like to submit the following..."

In the interest of uniformity, the mere use of interest group letterhead, references to terms such as "we" and "us" in the text of a comment or appeal, or a signature by an interest group member other than an officer or other authorized signatory, did not classify the comment or appeal as an interest group absent the initial language mentioned above. Additionally, it can be noted that some comments and appeals were filed on behalf of numerous interest groups or individuals, or both. In these instances, both the author of the comment or appeal, as well as the individual(s) or interest group(s) on whose behalf the author commented or appealed, were all counted as commenters and appellants. For example, if an individual filed a comment on behalf of five interest groups and four individuals, the public comment was recorded as being filed by a total of five interest groups and five individuals.

6. Case study analysis example: the Rucker Lap Timber Sale

The qualitative approach whereby the documentation for each project was analyzed was based on Miles and Huberman's (1994) pattern and theme identification. To better understand this application, this section details some of the more important aspects of how that analysis was performed.

The Rucker Lap Timber Sale on the Pedlar Ranger District of the GWJNF involved the decision to harvest approximately 1343 m³ of timber on approximately 24 ha using the modified shelterwood and thinning methods. The justification for the proposed action was to meet the direction set forth in the Forest Plan, as well as the desired future condition for Management Area (MA) 17. MA 17 contains portions of the GWJNF that were to be more intensively managed for timber using even-aged and uneven-aged timber cutting methods, and meant to provide a range of timber products in an

efficient and economical manner as consistent with multiple-use management.

The first administrative stage of the project included the release of a scoping notice/proposed action and 30-day public comment period. The Forest Service received eight public comment letters from four environmental interest groups, three individuals, and one forest industry group. The primary issues raised in these comments seemed to focus on ecological, regeneration, and timber harvesting concerns, and a majority of the commenters generally opposed the proposed timber sale (Table 1). The second administrative stage of the project included the release of an EA and 30-day public comment period. The Forest Service received one public comment letter from an individual who previously submitted a letter during the scoping period and generally opposed the proposed timber sale. The third administrative stage of the project included the release of a Decision Notice and a 45-day public appeal period. The Forest Service received one administrative appeal from the individual who previously submitted letters during the scoping notice and environmental assessment comment periods. The appeal was accepted by the agency and an informal disposition meeting was held between an Acting District Ranger, the District Silviculturist, and Robert Fener (the appellant). Mr. Fener did not wish to compromise or drop his appeal; thus, the appeal review continued. Mr. Fener was later notified that his appeal was denied and that the decision was affirmed. After the decision was affirmed, Mr. Fener filed a complaint in the U.S. District Court for the Western District of Virginia requesting a Temporary Restraining Order and Preliminary Injunction to prohibit the Forest Service from executing the timber sale. The District Court judge denied Mr. Fener's motion. Mr. Fener then filed an Emergency Motion for Stay pending appeal and Temporary Injunction in the U.S. Court of Appeals for the Fourth Circuit to prohibit execution of the timber sale. The Fourth Circuit granted the Stay and Temporary Injunction until the Fourth Circuit could resolve the appeal. Approximately seven months later, the Fourth Circuit judge affirmed the decision of the U.S. District Court, ending the dispute.

The primary commenter, appellant, and litigant in this case was Mr. Fener, who is an individual owning 38 ha of land surrounded by the GWJNF. Mr. Fener's inholding was approximately 61 m west of one of the cutting units, which comprised 11 ha that was to be cut

using the modified shelterwood method. Based on indications from the administrative record, court documents, and supplemental investigation via the World Wide Web, there was no evidence that Mr. Fener is affiliated with any group; thus, he was classified solely as an individual, whose interest may be due to the proximity of this property in relation to the timber sale.

In his scoping notice (SN) comments, Mr. Fener submitted Access, Aesthetics, Archaeological/Natural Heritage Resources, Climatic, Community Opposition, Hydrological, Old Growth, Regeneration, Timber Harvesting, and Water Resources categories, with comments, which seemed to be adequately addressed by the Forest Service. For example, Mr. Fener's aesthetics (1) SN comment stated:

Portions of Section 2 are within 200 feet of my home and are highly visible. This will destroy the view from the front of my house and potentially devalue the resale value of my property.

The Forest Service's response to this comment stated:

The southern 2/3 of Unit 2 will be visible from the dwelling on the inholding, private property to the west of Unit 2. Sale layout will minimize the visual concerns by leaving several clumps in the unit and feathering the top edge of the unit.

In his EA comments, Mr. Fener dropped the Hydrological, Old Growth, and Regeneration categories submitted in his SN comments, and he specifically dropped the timber harvesting (1 and 2) comments submitted in those categories in his SN comments, which may suggest that the Forest Service adequately addressed these comments. However, Mr. Fener submitted many new comments in his EA comments, which is expected because the EA provides the public with new information. For example, Mr. Fener added Ecological, Exotic/Invasive Species, and TES/PETS/MIS categories in his EA comments, which were not categories in his SN comments, and he specifically added the access (1), archaeological/natural heritage resources (2 and 3), and timber harvesting (1) comments in his EA comments, which were not previously submitted in those categories in his SN comments. Finally, the access (1 and 2), archaeological/natural heritage resources (1), climatic (1), community opposition (1), and water resources (1) comments in Mr. Fener's EA comments, were

comments previously submitted and specifically addressed by the Forest Service in his SN comments, which suggests that Mr. Fener was either not satisfied or simply disagreed with the Forest Service's responses. However, in most instances, the Forest Service seemed to adequately address these comments, but thereafter, Mr. Fener added more detail to or changed the direction of his SN comments in his EA comments, or simply disagreed with the Forest Service's responses to his SN comments in his EA comments. For example, Mr. Fener's access (1) SN comment stated:

In summer months the tall canopy provides a cool place to walk when fields and clearcuts are neck deep in ticks. In winter, when snow makes the road impassable, the forest provides the route I take between my home and where I park my vehicle. If this area is cut, the brush will be so thick a hound dog will have to back up to bark.

The Forest Service's response to this comment stated:

The sale will be administered in such a way as to provide for slash treatment between Units 1 and 2 so as to allow foot travel to the inholding in bad weather, and to keep an old road open in Unit 2 for the same reason.

In his EA comments, Mr. Fener also submitted a new comment in the Access category, stating:

If hunters are unable to use the proposed cutting areas, this will result in greater incursions on my property.

In addition, he changed the direction of his access (1) SN comment in his EA comments, stating:

I appreciate the consideration to my concerns about accessibility, but I am curious why the space between compartments was held to 330 feet (minimum) but not considered for adjoining edges of private properties.

In his administrative appeal, Mr. Fener dropped the Exotic/Invasive Species, Hydrological, and Old Growth categories submitted in his SN or EA comments, and he specifically dropped the access (1) and regeneration (1) comments submitted in those categories in his SN comments and the archaeological/natural heritage resources (2 and 3) and timber harvesting (1) comments submitted

in those categories in his EA comments, which suggests that the Forest Service adequately addressed these comments. However, Mr. Fener added Alternatives, Cumulative Effects, Economics, Environmental Analyses/Documentation, Riparian Areas, Roads, and Wildlife categories, which were not categories in his SN or EA comments, and he specifically added the aesthetics (3), ecological (4 and 5), regeneration (1), TES/PETS/MIS (2 through 4), and water resources (2) appeal issues, which were not previously submitted in those categories in his SN or EA comments. These new appeal issues seem to be problematic because the Forest Service could not have addressed them before a decision was issued, thereby possibly preventing expensive and time-consuming administrative appeals or litigation.

The access (1), adjacent landownership (2), aesthetics (1 and 2), archaeological/natural heritage resources (1 through 3), climatic (1), community opposition (1), ecological (1 through 3), TES/PETS/MIS (1), timber harvesting (1), and water resources (1) appeal issues in Mr. Fener's administrative appeal, were issues previously submitted and specifically addressed by the Forest Service in Mr. Fener's SN or EA comments, which suggests that he was either not satisfied or simply disagreed with the Forest Service's responses. However, in most instances, the Forest Service seemed to adequately address these comments, but thereafter, Mr. Fener added more detail to or changed the direction of his previous comments in his administrative appeal, or simply disagreed with the Forest Service's responses to his previous comments in his administrative appeal. For example, Mr. Fener's water resources (1) comment in his SN comments stated:

It is a matter of great concern that oil, diesel, fuel, herbicides, or pesticides, etc., will be above my water source.

The Forest Service's response to this comment stated:

During timber sale administration, enforcement of standard timber sale contract provisions will serve to protect nearby water courses from contamination by oil or other chemical pollutants.

Mr. Fener was not satisfied with this response, stating in his EA comments that:

Although the EA did address my concerns of water quantity, it ignored my concerns that pollutants

will be above my water source and seeping into my aquifer.

The Forest Service's response to this comment stated:

Herbicides and pesticides are not part of this proposal. The landings are a quarter of a mile from his property, and contract provisions will ensure that any spills of oil or diesel fuel will be minimal and quickly cleaned up.

In his administrative appeal, Mr. Fener added more detail to and changed the direction of this comment, stating:

The stream protection standards referenced in the DN/FONSI will not eliminate the hazard that the appellant's water source will be polluted, nor have the protection provisions which will govern the contractors operating in the area been specified. The protection provisions by which the contractor operates are not specified. The use of the cutting units as sources of firewood will result in continual chainsaw noise and fuel contamination in the immediate vicinity of the appellant's property, and there is no provision for monitoring and enforcing appropriate restrictions against private individuals who may choose these areas to obtain firewood.

The ADO's response to this appeal issues stated:

I find that the Forest standards and contractual requirements are sufficient to limit impacts to water quality and stream habitats from the hazard of fuel or other hazardous materials that may be associated with activities. During implementation of the project, the District should consult with you as to the location of your private water intake and/or well and make sure refueling or other transfer of these materials within the immediate vicinity of your private property are safe and secure locations. In addition, any follow-up silvicultural activities should be aware of your concerns, including protection to your water supply and private property.

Finally, it is important to note that the increasing number of appeal issues, and the fact that Mr. Fener's administrative appeal was in the exact form of a legal

document, possibly indicates that he was attempting to delay the project and prepare for future legal action. For example, Mr. Fener's administrative appeal had "Robert F. Fener v GWNF..." in the top left-hand corner on the front page and a blank to fill in the "Case No." on the top right-hand side of the front page.

In the U.S. District Court for the Western District of Virginia, Mr. Fener filed a complaint nearly identical to his administrative appeal, and for the most part, simply had to change the term "appellant" to "plaintiff." These issues are reflected in the Final Order from the District Court Judge. In the Final Order, the District Court Judge held that: (1) the decision of the Forest Service not to prepare an EIS for the proposed timber sale was adequately supported by the record and thus was not arbitrary and capricious; (2) the Forest Service did not act arbitrarily and capriciously in its evaluation of the cumulative effects of the proposed sale on the national forest, the no action alternative, the profitability of the harvest, the landowner's offer to purchase trees, the even-aged cutting method, the citizen petition opposing the timber sale, the visual quality issues, the archeological resources, the wind issues, the hydrological factors, the hazards of pollution to the landowner's water source, the regeneration/accessibility considerations, wildlife, and tree diversity; and (3) the NFMA and its implementing regulations did not require the Forest Service to use scientifically substantiated methods of sediment prediction when considering timber harvest. Thus, Summary Judgment was granted in favor of the Forest Service, and the plaintiff's Preliminary Injunction motion was denied (Fener v. Hunt, 1997), clearly indicating that the Forest Service complied with all rules, regulations, and statutory requirements for project-level activities.

7. Cross-case analysis observations

7.1. Observation I: project attributes

Although we know, for example, that timber harvesting (especially with even-aged methods), road construction, prescribed burning, herbicide use, old growth, and threatened and endangered species tend to be provocative issues for public participants, each case includes some combination of these issues that may

have been likely to prompt administrative appeals or litigation. The primary attributes for each case are highlighted in Table 4, and upon review, it is difficult to pinpoint apparent reasons for why these cases prompted administrative appeals and litigation. Clearly, all of the projects were prepared with less intense levels of environmental analysis under the NEPA.² This may be expected, since all of the projects were relatively small – less than 300 ha in all cases – and were not intended to harvest large volumes of timber – less than 4700 m³ in all cases. Even the administrative purposes of the projects lend little clue. While seven of the twelve projects were timber production oriented, fully six of the twelve had recreation, aesthetics, forest health, or wildlife as the primary purpose, though all but one project involved some degree of timber harvesting, and this one exception involved a chemical application.

It is important to note that all of the cases that entailed some type of timber management (except for the GMPRS), were located primarily in MAs designated for timber production in the GWJNF Land and Resource Management Plans (LRMPs), and categorical exclusions or EAs were conducted, rather than EISs. Additionally, the size of each project was relatively small, ranging from only 8 to 85 ha in size, with a range of only 390 m³ to 4700 m³ of volume harvested. Thus, it appears that relatively small timber harvesting projects, even those in MAs designated for timber production, nonetheless seemed to be fundamentally unacceptable to various public participants in these cases. One must also question whether regardless of project size and impact, some public participants may be using the legal mechanisms institutionalized in the participation process to demand a heightened level of environmental analysis, and are willing to use lawsuits to oppose projects that do not reflect that heightened level of analysis.

Moreover, public participants involved in litigation often claimed that the Forest Service was not managing under the multiple-use principle, and that the agency was biased towards timber production. This perception may result from the fact that the areas in the

study were designated for emphasis on timber production or other forest resources that require timber management activities (e.g. wildlife habitat improvement) at the forest planning phase. Thus, it may be that implementation of forest plans serve to focus public dissatisfaction. One might question if public participants are more willing to accept management area designations at the forest planning phase since no real action is being taken. However, once implementation of the forest plan commences, with identifiable and discrete effects, public participants appear to return to their fundamental and philosophical value principles, raising *post hoc* disagreements with the management area designations and the proposed actions that result from those designations. This suggests that more detailed consideration of investments in public involvement during the forest planning, pre-NEPA, or NEPA phases might be warranted. (Germain et al., 2001).

7.2. Observation II: public participant attributes

For all public comment periods combined in the twelve study projects, there were a total of 192 letters filed by individuals and 104 letters filed by interest groups, representing a total of 163 individuals and 40 special interest groups after removing participant overlap. Thus, it appears that more individuals filed public comments than interest groups. However, it is important to note that 111 individual comments in one case were actually comments collected by an environmental group on postcards and collectively submitted to the Forest Service. In that instance, each individual was counted as a separate commenter. If these comments were collectively classified as one comment filed by a portion of the public represented by that particular interest group, the results would be notably different. Instead of 163 individuals being classified as submitting comments, only 52 individuals would have been recorded. This illustrates one of the pitfalls associated with relying too heavily on quantitative analysis methodologies and the possible biases that could result.

For all appeal periods combined, the Forest Service received 36 administrative appeals from a total of 43 interest groups and 23 individuals, representing a total of eighteen interest groups and 20 individuals after removing participant overlap. Thus, it appears that

² All of the projects relied upon either a categorical exclusion or an environmental assessment. None of the projects involved the preparation of a environmental impact statement. The agency has the legal discretion to make this decision based on the scope and anticipated effects of the projects.

Table 4
Case attributes

Project name	Analysis type	Management area emphasis	Size (hectares)	Harvesting/primary activities	Cubic meters
Rucker Lap Timber Sale (RLTS)	EA	Timber production	24	Modified shelterwood/thinning	1342
Hematite Timber Sale (HTS)	EA	Timber production	76	Modified shelterwood	488
Alba Salvage Timber Sale (ASTS)	CE	Dispersed recreation/aesthetic resources	8	Salvage dead and dying trees	472
Arney Groups Project (AGP)	EA	Forest and wildlife health	91	Clearcutting/group selection/thinning/overstory removal/shelterwood with reserves	4481
Terrapin Mountain Project (TMP)	EA	Forest health and timber production	45	Shelterwood/shelterwood with reserves	2594
Wilson Mountain Project (WMP)	EA	Forest and wildlife health	79	Shelterwood with reserves	4717
Chestnut Ridge #2 Timber Sale (CRTS)	EA and revised EA	Wildlife habitat enhancement	64	Modified shelterwood/thinning/prescribed burning	1243
Gypsy Moth Pheromone Research Study (GMPRS)	EA	Aesthetic and wildlife resources	300	Gypsy moth pheromone flake aerial application	N/A
Buffalo Branch Fuelwood Sale (BBFS)	CE and EA	Timber production	24	Thinning	390
Taylor Branch Salvage Sales (TBSS)	CE and EA	Timber production and wildlife habitat	53	Seed tree/group selection/salvage/prescribed burning/firewood	1297
Cuba Timber Sale (CTS)	CE and EA	Timber production and wildlife habitat	45	Modified shelterwood/prescribed burning	502
McJennings Project (MJP)	EA	Timber production and wildlife habitat	72	Shelterwood with reserves	4009

individuals filed more administrative appeals than interest groups. The seven lawsuits associated with the study included eight individuals and eight interest groups, representing seven individuals and seven interest groups after removing participant overlap. Thus, litigant participation was equivalent among individuals and interest groups in these cases.

In summary, more individuals filed public comments and appeals than interest groups, and individuals and interest groups filed an equal number of lawsuits. Although these observations do not display a trend, it is important to mention that only one commodity-related interest group (Appalachian Forest Management Group) participated in any of the cases, while numerous environmental interest group participated throughout the cases. This concurs with Overdevest's (2000) findings from the Nantahala National Forest in North Carolina that public policy decisions have created a situation in which environmental interest groups have the institutional ability to win victories against what might be perceived as contra-environmental decisions by the agency. While only a fraction of the environmental interest groups in

this study participated beyond the public comment stages (Forest Guardians, Forest Conservation Council, Sierra Club, National Forest Protection Alliance, Heartwood, Southern Appalachian Biodiversity Project, Virginia Forest Watch, and Idaho Sporting Congress), these same groups are among the most active national forest appellant groups in the United States identified by Cortner et al. (2003). This observation raises potential concerns about the diversity, inclusiveness, and effectiveness of current public involvement processes in a context where incentives exist to use litigation to force agency action (Mortimer, 2002). We must also question to what extent the views espoused by active appellants and litigants is reflective of the larger public interest. If, as Overdevest (2000) suggests, the two are largely aligned, then the process may be effectively structured. If, however, there is a divergence between the agendas of environmental interest groups and the desires of the silent public, then institutional mechanisms that facilitate environmental activism may be in need of reappraisal. These are public policy questions that additional empirical investigation

should address on a larger scale than a single national forest.

7.3. Observation III: pre-decisional and post-decisional review

7.3.1. Scoping and environmental assessment comments

Public SN and EA comments in these cases often seemed appropriate and in the procedural context likely to improve Forest Service environmental analyses and decision-making, though not in all instances. At the scoping stage, the GWJNF provided the public with general information about the proposed projects, basically allowing them to formulate opinions and concerns. The agency utilized such opinions and concerns to identify significant issues, determine the scope of environmental analyses, and design alternative courses of action.

At the EA stage, public comments revealed concerns about the environmental effects analyses, about possible mistakes in analyses, and about proposed actions generally. For example, one interest group accurately noted that the GWJNF would be in violation of the Jefferson National Forest LRMP if implementation proceeded as planned. In addition, many new comments arose at the EA stage that were not previously mentioned during earlier public involvement stages. This is not unexpected, since the EA provides the public with new information to respond to, such as all the alternatives considered and environmental effects analyses conducted. However, the content of a number of these comments requested additional analyses, inventories, surveys, mitigation measures, and other assurances to reach a level of scientific certainty that extends beyond mandated laws, rules, and regulations: the production of which would likely exceed Forest Service capabilities and resources (USDA, 2002).

7.3.2. Administrative appeals

Though surely context specific, in these cases public concerns raised in administrative appeals seemed largely ill-suited for improving agency decision-making, as the agency was being presented with these issues, often for the first time. Had such issues been raised prior to the appeal stage, it would have permitted the Forest Service to address them before a decision was issued. Timing

difficulties arise when the public raises original concerns about EAs at the appeal stage, particularly when the information was available from the draft EAs prior to the public's EA comments. Additionally, the opportunity for the public to appeal appeared to discourage pre-decisional information-sharing and collaboration. In other words, the incentive is created for public participants to raise new concerns at post-decisional stages, particularly if the intent is to delay project implementation, or see projects administratively reversed or judicially enjoined. As Germain et al. (2001) note, a more consultative project development process may mitigate public dissatisfaction, and in cases similar to those we studied, may reduce the eventual opposition that arises in the form of appeals or lawsuits.

Although the appeals process has the potential to identify Forest Service errors, in this study correcting those errors was no guarantee that future appeals or litigation would not occur. Consider that two environmental interest groups identified an agency error in their appeal of a timber sale included in the study (Table 4, CRTS). After reviewing the appeal, the Appeal Deciding Officer reversed the District Ranger's decision, meaning that the Forest Service had to repeat all administrative procedures and public involvement processes. While the Forest Service did so, it nonetheless faced a new appeal from the same groups, as well as a subsequent lawsuit.

7.3.3. Legal arguments

The lawsuits in this study were an amalgamation reflecting prior comments and appeals, and were based primarily on procedural, not scientific claims. Such allegations pointed to procedural violations of the Administrative Procedures Act (APA), the NEPA, the NFMA, the Endangered Species Act (ESA) of 1973, the Multiple-Use Sustained-Yield Act (MUSYA) of 1960, and the LRMPs for the GWJNF. All of these legal obligations contain numerous procedures the Forest Service must follow to implement projects, and provide many options for public participants motivated and willing to judicially challenge Forest Service project-level activities. Common public complaints in this study included: (1) the Forest Service did not consider a "reasonable" range of alternatives (NEPA); (2) the Forest Service did not adequately analyze cumulative effects (NEPA); and (3) the Forest Service did not properly apply the multiple-use principle for any given

project (MUSYA). The scientific ambiguities inherent within terms such as *reasonable*, *cumulative effects*, and *multiple-use* tend to compound the difficulties the agency faces in complying with its legal obligations. If the agency is facing opposition stemming from differences in public values, imprecision in the scientific lexicon will only aggravate those differences. It would be informative to investigate the extent to which agency personnel and the public share the same functional definitions.

Despite these challenges, the Forest Service prevailed in six out of the seven cases, which took place in the U.S. District Court for the Western District of Virginia and in the U.S. Court of Appeals for the Fourth Circuit. The only case that the Forest Service lost (TBSS and CTS), in part, took place in the U.S. District Court for the Northern District of Georgia, since a timber sale on the Pisgah National Forest in North Carolina was included in the lawsuit. The immediate question is institutional: is there a tendency for litigants to seek venues in which they have a more likely chance of success against the agency? This study could not answer that question, but it does suggest considering the public policy ramifications if that is in fact occurring. For example, where should court cases that involve a national forest be resolved — in the federal court nearest the forest in dispute, or in some other venue?

7.4. Observation IV: implementation timing

Case analysis demonstrated the time involved with administrative and judicial procedures. As Table 5 depicts, compliance with these processes is time-consuming, taking an average of 38 months. Litigation can also delay project-level actions. Consider that it only took five months to complete comment and appeal procedures for the Alba Salvage Timber Sale (ASTS), which might be expected as it qualified for a categorical exclusion under the NEPA. However, subsequent litigation delayed implementation for an additional 20 months. Such delays can negate the economic value of the dead and dying timber defoliated by gypsy moths and jeopardize forest health, since the purpose of the ASTS was to salvage the dead and dying timber, rehabilitate the scenic resource, and utilize the coppice sprouting potential of the remaining live trees before they were defoliated by gypsy moths.

This observation suggests that litigation has the potential to undermine the purposes of categorical exclusions, and could have serious impacts, for example, in cases outside of this project that involve newly enacted categorical exclusions designed to reduce fuel loads for preventing catastrophic wildland fires. A higher resolution look at this issue on a broader scale appears to be warranted, particularly the institutional relationship and purposes between categorical exclusions, appeals, and lawsuits. The uncertainties of this relationship continue to be dramatically demonstrated.³

7.5. Observation V: lack of procedural standardization

7.5.1. Administrative deficiencies

The decentralized nature of the Forest Service may be creating inconsistencies with procedural documentation and application of processes, procedures, regulations, and laws. In this study, there were noticeable format differences between the EA's prepared for each project, and likewise noticeable differences between the project products generated by each Ranger District. For example, document formats, responses to public comments, analysis methods, and data quality varied for the EAs in each project. Such inconsistencies are likely to confuse public participants, violating a fundamental premise of effective public consultation that the agency process be transparent and that there be clarity among the project resources (Buchy and Hoverman, 2000). These limited observations raise concerns that substantial inconsistencies are likely to exist among the 155 National Forests and more than 600 Ranger Districts in the United States, and that such inconsistencies may be playing a chronic, though unquantified role in interfering with more effective public participation.

7.6. Observation VI: public participation during the NEPA process

Throughout the administrative procedures in each case, the level of public participation appeared constrained, with a limited exchange of information and ideas between the Forest Service and the public. In

³ *The Wilderness Society v. Rey*, Federal District Court of Montana, Case No. CV 03-119-M-DWM (2006).

Table 5

Time involved with administrative and judicial procedures for Forest Service project-level activities

Activity	Case					
	RLTS	HTS	ASTS	AGP	TMP	WMP
SN mailed	1/12/95	2/10/95	8/5/96	5/18/95	5/20/96	5/20/96
SN comment period ends	2/16/95	5/30/95	8/30/96	6/28/96	10/1/96	6/21/96
EA mailed	10/30/95	3/1/96	9/3/96 ^a	2/10/97	3/31/97	7/14/97
EA comment period opens	11/2/95	3/3/96	9/6/96 ^a	2/14/97	4/3/97	7/18/97
EA comment period closes	12/2/95	4/2/96	10/5/96 ^a	3/16/97	5/3/97	8/17/97
DN/FONSI mailed	2/20/96	5/17/96	10/17/96 ^b	3/20/97	10/3/97	10/6/97
Appeal period opens	3/1/96	5/21/96	10/20/96	3/25/97	10/7/97	10/9/97
Appeal period closes	4/14/96	7/6/96	12/3/96	5/9/97	11/21/97	11/23/97
Appeal decision	6/7/96	8/22/96	1/11/97	7/3/97	1/12/98	1/29/98
Total time for appeal procedures	4 months	3 months	3 months	3 months	3 months	4 months
Total time for comments and appeals procedures	1 year, 5 months	1 year, 6 months	5 months	2 years, 1 month	1 year, 8 months	1 year, 8 months
Complaint filed in U.S. District Court	4/16/97	11/19/96	4/30/97	4/16/98		
Final order in U.S. District Court	6/24/97	7/3/97	8/27/98	8/17/98		
Appeal to U.S. Court of Appeals	11/12/97	3/31/98	–	8/20/99		
Final order in U.S. Court of Appeals	6/23/98	4/9/98	1/8/99	9/24/99		
Total time for litigation	1 year, 2 months	1 year, 5 months	1 year, 8 months	1 year, 5 months		
Total time for case	3 years, 5 months	3 years, 2 months	2 years, 1 month	4 years, 4 months	3 years, 4 months	3 years, 4 months

Activity	Case					
	CRTS	GMPRS	BBFS	TBSS	CTS	MJP
SN mailed	5/30/96	12/21/99	3/6/98	8/5/98	9/29/98	11/8/00
SN comment period ends	7/5/96	1/22/00	4/3/98	9/8/98	10/29/98	12/18/00
EA mailed	1/17/97	3/1/00	2/22/99 ^a	–	1/6/99 ^a	8/16/01
EA comment period opens	1/25/97	3/4/00	3/1/99 ^a	–	1/9/99 ^a	8/21/01
EA comment period closes	2/23/97	4/3/00	3/31/99 ^a	–	2/8/99 ^a	9/19/01
DN/FONSI mailed	11/12/97	4/12/00	5/7/99 ^b	9/29/98 ^b	2/24/99	9/26/01
Appeal period opens	11/17/97	4/16/00	5/13/99	10/3/98	2/27/99	10/2/01
Appeal period closes	12/31/97	5/31/00	6/27/99	11/17/98	4/13/99	11/15/01
Appeal decision	3/13/98	6/12/00	–	–	6/18/99	1/14/02
Total time for appeal procedures	4 months	2 months	–	–	4 months	4 months
EA mailed	8/20/98 ^c	–	2/8/00	1/5/99 ^a	1/21/00	–
EA comment period opens	8/24/98	–	2/14/00	1/8/99 ^a	1/15/00	–
EA comment period closes	9/23/98	–	3/16/00	2/7/99 ^a	2/24/00	–
DN/FONSI mailed	2/1/99	–	3/17/00	3/8/99 ^b	3/28/00	–
Appeal period opens	2/5/99	–	3/24/00	3/11/99	4/1/00	–
Appeal period closes	3/17/99	–	5/8/00	4/25/99	6/16/00	–
Appeal decision	5/18/99	–	7/10/00	7/9/99	6/18/00	–
Total time for appeal procedures	4 months	–	4 months	4 months	3 months	–
EA mailed	–	–	–	12/29/99	–	–
EA comment period opens	–	–	–	12/31/99	–	–
EA comment period closes	–	–	–	1/30/00	–	–
DN/FONSI mailed	–	–	–	3/20/00	–	–
Appeal period opens	–	–	–	3/22/00	–	–
Appeal period closes	–	–	–	5/6/00	–	–
Appeal decision	–	–	–	7/18/00	–	–

(continued on next page)

Table 5 (continued)

Activity	Case					
	RLTS	HTS	ASTS	AGP	TMP	WMP
Total time for appeal procedures	—	—	—	3 months	—	—
Total time for comment and appeal procedures	3 years	6 months	2 years, 4 months	1 year, 11 months	1 year, 10 mos.	1 year, 2 mos.
Complaint filed in U.S. District Court	2/4/00	8/9/00			3/21/02	
Final order in U.S. District Court	3/19/01	9/21/01			12/13/02	
Total time for litigation	1 year, 1 month	1 year, 1 month			9 months	
Total time for case	4 years, 10 months	1 year, 8 months	3 years, 6 months	3 years, 2 months	3 years, 2 months	2 years, 1 month

^aThis project was categorically excluded, therefore there is no EA, just a 30-day Review Notice comment period.

^bIndicates the documentation of a Decision Memo, instead of a Decision Notice.

^cIndicates a Revised Environmental Assessment.

other words, the Forest Service provided the public with information and requested comments, the public responded with written comments, and the Forest Service addressed these comments with written responses. Evidence of interactive discussion or two-way communication (i.e. face-to-face or verbal) between the Forest Service and the public was rarely found within the administrative records. When it occurred, it was limited to telephone discussions and field trips with a few individuals at pre-decisional stages, and several informal disposition meetings required by 36 C.F.R. § 215 once administrative appeals were filed. In these cases, all of these efforts failed to resolve disputes and prevent administrative appeals or litigation.

While the observed agency process reflects what Chase et al. (2000) label the *inquisitive approach*, it raises two related questions that would be suitable for further investigation. One, would a more interactive decision-making approach, one that involved stakeholders in the development of projects, prevent the appeals and litigation of agency projects? Two, if these active stakeholders were more intimately involved in the decision-making process, would their participation reflect larger public values or the public interests? It is possible that pacifying the most vocal critics would imply management prescriptions that might undermine other management obligations.

This study raises an uncertainty whether post-decisional public participation is a desirable method for resolving disputes; perhaps the public and the Forest Service would instead benefit from increasing public participation events at pre-decisional stages. For example, it may prove beneficial to work with the public to develop proposed actions before the NEPA process

begins with what Chase et al. (2000) describe as a *transactional approach*; to help the public submit effective public comments and explain more clearly how their comments may influence the NEPA process; conduct more public meetings and workshops during the NEPA process to show the public how their comments were used; to explain how the alternatives to the proposed action are developed; to describe how the environmental analyses are conducted; and to ask for their input during each of these stages.

In any event, there was clearly a lack of two-way public participation in these cases at pre-decisional stages. Thus, an increased emphasis on pre-decisional public participation for Forest Service project-level activities, regardless of the size of the project, with a corresponding examination of post-decisional processes, warrants further empirical investigation and consideration.

8. Conclusions and needs for future research

By design, this study raised more questions than it answered. Those questions can serve two useful purposes. The first is embedded in the research design. The observations of this study should highlight areas for future research emphasis. Many of this study's methods could be applied more extensively — on other national forests; on different types of project-level activities such as road construction or the development of campgrounds; on projects not leading to appeal and/or litigation; and with the use of other data sources such as interviews. Furthermore, there is a clear need for more empirical studies on public participation methods used during different Forest Service planning or

project-level efforts; on methods used before, during, and after the NEPA process; and the relative successes or failures of such methods. As an example, consider that there appears to be an interested and vocal minority of individuals and environmental interest groups that recognize the uses and purposes of national forests, but often disagree with how projects are implemented or are perhaps unwilling to collaborate or compromise with opposing interests. It remains unclear whether a more collaborative form of public participation would resolve this problem, and if so, what institutional changes to laws and regulations would be required to implement such an approach. Correspondingly, future research may consider questioning and evaluating the purpose of national forest public involvement processes with the goal of ensuring that the wants and needs of the disinterested and silent majority are accounted for and protected as well as the concerns of activist stakeholders.

The second valuable result of the questions raised is that they can serve as foci for discussions of future national forest policy development. As amendments to these policies are ongoing in various federal political forums, the interactions observed here could provide both guidance and areas for emphasis. Here, we could see this illustrated by the procedural timing question: Do the public involvement processes work in reverse, providing incentives for post-decisional challenges and discouraging pre-decisional collaboration, compromise, and information-sharing? In this study, public issues of concern were expanded rather than distilled as the projects progressed, perhaps indicating that a defect exists in the participation process as envisioned by the Forest Service. Or perhaps public participants recognized that focusing efforts and raising new or expanded concerns at post-decisional stages was advantageous. In other words, it seems that public efforts focused at post-decisional stages make it difficult for the Forest Service to address concerns before decisions are issued, thereby increasing the likelihood of expensive and time-consuming appeals or litigation.

To fully answer these questions and resolve potential problems, it is clear that a qualitative analysis of 12 Forest Service project-level activities that resulted in litigation on 2 of the 155 national forests in the United States captures only a minute part of a sizeable, complex situation. Regardless of these limitations, conducting similar qualitative studies in this research

area may be the next step in furthering our understanding of what the public is saying and why, and how that involvement should occur to best serve the public interest.

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